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ABSTRACT

In February 1988, a National Advisory Panel was brought together to discuss the role of North Carolina's community colleges in a rapidly changing economy. This paper summarizes the findings and suggestions that emerged from the meeting. Chapter I examines the original purposes and current mission of the state's community college system. Chapter II considers the changes taking place in North Carolina that will affect adult education and training, focusing on economic trends, technological challenges, educational shifts, and demographic projections. Chapter III looks at those members of the workforce who fall below the national average in educational attainment and economic prosperity, and the social and economic costs involved in neglecting their educational and training needs. While acknowledging that there is no simple answer to the issue of functional illiteracy, the paper advocates a more integrated approach to basic skills education and vocational-technical training. Chapter IV offers recommendations for transforming the North Carolina Community College System, including: (1) the adoption of a mission statement that stresses the mastery of the academic and occupational requirements of the workplace and the technological needs of business and industry; (2) the creation of a governance structure that would enable the system to act in concert and allow for innovation and flexibility at the institutional level; and (3) the development of processes for measuring quality and performance, and the establishment of incentives for continuous improvement of the teaching/learning process. A paper suggesting issues for further study is appended. (AJL)

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A Commentary By
The National Advisory Panel

For

The Commission on the Future of the
North Carolina Community College System

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May 1988

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Preface and Acknowledgments

On February 19, 1988, MDC, Inc., asked a group of distinguished Americans to Chapel Hill to discuss the role of community colleges in a rapidly changing economy. It is a tribute to the system and evidence of its national reputation that such a group would take time from busy schedules to join this discussion. It is also testimony that the work of the Commission on the Future of the North Carolina Community College System has national significance. Finally, it is testimony to the role that community colleges have in responding to the educational and economic challenges of the twenty-first century.

The Panel and MDC acknowledge with gratitude the attendance and contributions of Stuart Rosenfeld, George Esser, Kathryn Baker Smith, and Sanford Shugart during the group's deliberations. Dr. Rosenfeld is Director of the Southern Technology Council; Mr. Esser was a member of the team that examined North Carolina's third century of higher education for the Z. Smith Reynolds Foundation in 1987; Ms. Smith is Director of Planning for the Department of Community Colleges; and Mr. Shugart is Vice President for

Programs for the Department of Community Colleges. MDC staff members assigned to this project and participating in the study are Dennis Bartels, David Dodson, and Carol Lincoln. Sherwood Smith, Chairman of the Commission on the Future of the North Carolina Community College System, participated in the preliminary discussions with Panel members and made valuable suggestions on early drafts of this report.

The following pages do not constitute a research report. Rather, they are a distillation of findings and suggestions which emerged toward the end of the Panel meeting. MDC hopes that this summation of the trends and approaches will assist the Commission in framing the critical questions that must be answered over the coming year.

George B. Autry
President, MDC, Inc.

THE BRIDGE TO THE NEXT CENTURY

A Commentary by the
MDC Community College National Advisory Panel

For the Commission on the Future of the
North Carolina Community College System

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Chapter I

THE LEGACY

North Carolina is celebrating the twenty-fifth anniversary of its Community College System. It is impressive that a system so young, one created and crafted to respond to structural economic change just a generation ago, today could span the state and reach more than 600,000 people a year. According to one of its founders, the system was designed to attract new industry to the state and to prepare the work force for jobs in that industry. Thanks to the work and vision of others, it has quickly become a system which educates as well as trains, which provides service to the community in general in addition to industry, in particular. By most economic indicators, North Carolina is ahead of its sister states with a similar economy and cultural history, and much of the credit belongs to investments that were made in a system of technical institutes and community colleges that eased North Carolina's transition from an agricultural into a manufacturing economy. It is an altogether extraordinary achievement.

Today, North Carolina is poised once again on the brink of a new economy, and the state looks once again to its community colleges to meet the challenge of changing

economic and social conditions. North Carolina is fortunate to have a system that is structurally flexible and can be molded to the needs of new times relatively easily. Certainly, it should be simpler to retool this system for the new economy than it was to invent one for yesterday's.

Enlightened Foresight

By now, the nation's coming economic dilemma must be as familiar to the Commission as it is to this panel. We nod our heads by reflex when we hear calls for improving the scientific and technical education of our children and adults. We shake our heads in lamentation at the continued scourges of poverty and illiteracy in the face of the coming "information age," the "postindustrial economy," and the "high-tech society." To state the dilemma as precisely as possible:

How does an education and training system equip workers for an economy evolving at an accelerating pace, fueled largely by new knowledge and technology and requiring progressively higher skills, at the same time when an increasing proportion of the workforce lacks the most basic competencies to compete in this changing economy, and is falling further behind?

We cannot shape an optimal system of education and training for the next quarter-century without seeing and comprehending current trends and realities. On the other hand, the mere recognition of these trends does not indicate how to deal with them. However, they do suggest that the Commission begin with two fundamental propositions:

1. The community colleges must serve as the primary vehicle through which North Carolina prepares for and adapts to rapid technological change. While the system will not be called upon to create new knowledge and technology -- that is the realm of the university -- it can and must serve both to help spread new technologies and information through the economy and to prepare workers and potential workers to understand, adapt to, and master the changes wrought by technological progress; and
2. the community colleges must serve as the primary bridge through which those in the bottom fifty percent of our population in terms of educational attainment and economic prosperity overcome the increasing economic, educational, technological, and cultural barriers that separate them from a productive place in our society.

In the next two chapters, we will describe these two challenges in more detail and pose more specific questions for the Commission to ponder. As a helpful metaphor, we encourage the Commission to think of the Community College System as a network of bridges linking people to jobs, to more education, to advanced training, to new technologies, to becoming entrepreneurs. More important, it might be useful to think of the System as the state's economic bridge to the twenty-first century -- a bridge that was once successfully designed to take the state into the manufacturing age and now must be transformed to take it into the information age.

Chapter II

THE CHALLENGE OF CHANGE

Our task as an advisory panel to the Commission on the Future of the North Carolina Community College System was to reflect on the economic and societal changes that are taking place at an accelerating rate, and to consider the implications of these changes for adult education and training in North Carolina.

Anticipated Changes in the Economy

The state's economic base, which shifted during the 1950s and '60s from agriculture to manufacturing, is once again shifting -- this time towards the knowledge and service industries. Although manufacturing will continue to be important in North Carolina for many years to come, the trade, service, and information management occupations are growing rapidly, and most new jobs are being created by new business starts and small business expansions. Further, these young enterprises are required to compete on a radically different playing field -- a global economy, which rewards ever higher standards of quality and efficiency, and requires businesses to master emerging technologies to stay competitive. Corporations which fail to adapt will disappear, and jobs for workers who fail to meet world-class

standards of quality and productivity will be destroyed. American workers will have to work smarter to maintain their positions and standards of living.

Twenty-five years ago the content of jobs was predictable and concrete. In this new economy, it is more difficult to describe the characteristics and mix of occupations at any given point since new technological breakthroughs could change whole industries in a very short period of time. Not only is this true in terms of forecasting labor market demand and job skill requirements, but in the very definition of many occupations. The office secretaries, insurance claims adjusters, and automotive mechanics of today hardly resemble their predecessors. Indeed, the systems analyst or genetic engineer had no predecessor. New jobs will combine the former responsibilities of several positions.

The nature of work also is changing, as workers will confront more and more ambiguity in the workplace. Manual dexterity was once the synonym for worker competence; tomorrow, increasingly, competence will mean mental dexterity. Work has been characterized by routine, repetitive tasks performed by the individual; now what is required is the ability to use analytic tools to make informed decisions and solve problems as part of team assigned to a complex task. This will be true in manufacturing as well as other sectors of the economy -- the

same challenges will be posed at a lab, in an office, and on the shop floor.

Traditional career paths also are being altered. Automation will continue to threaten low and middle-level production and service jobs. Career advancement opportunities will be limited by the sheer quantity of aging baby boomers. The climb up career ladders will be replaced by more lateral career moves into positions of similar status but with different responsibilities. Workers will change careers four to seven times over their lifetimes, interrupting employment to pursue more education. These changes ushered in by the information economy will reward flexible institutions and individuals who can react quickly to a variety of new and challenging circumstances.

The Challenges Posed by Technology

A determining factor in the ability of North Carolina and the United States to succeed economically will be the skill with which businesses and the workforce adapt to technological change. Today that change is altering every industry and occupation, from retail sales clerk to production worker. If prosperity is a function of productivity, and if raising productivity is dependent on a better trained and technologically-fluent workforce, then North Carolina's community colleges are uniquely positioned to contribute to the state's economic development as an

agent of technology transfer and as a vehicle to prepare people for technology-based jobs at various levels of sophistication.

States need the capacity to develop practical applications for the technologies created in their research institutions, and to help businesses and workers learn how to take advantage of these innovations. There are model institutions in other states which have demonstration centers to train adults in new technologies, to test new processes and procedures, and to provide access to national networks of technical information. For the North Carolina Community College System to keep abreast of the innovations emerging at research centers as well as to anticipate and monitor the technology requirements of industry, it needs to develop information networks among research agencies, other educational institutions, business and industry, and local communities. North Carolina's community and technical colleges are a particularly important resource for rural areas with few other sources of technical nonagricultural education, expertise, and information, and for workers with limited educational experiences who also may have few other opportunities to be exposed to technology.

Technology also is transforming the very delivery of education. Learning technologies have been introduced to assist the learning process: Computer software packages today come with "on-line help"; instructors can assign work

problems by floppy disk; illiterate adults can learn the alphabet with the help of interactive video programs; and students can place themselves in courses through computer testing and screening programs. These learning technologies provide attractive alternatives for many students who failed to thrive in traditional classroom settings. They also reinforce the development of many requisite skills for employment -- such as the ability to type; to read and interpret graphs, charts, and monitors; to manipulate data; and to learn new information quickly.

Anticipated Changes in Education

At a time when the country is awakening to the importance of basic literacy skills -- the ability to read, write, and do mathematical computations -- it is confronted with the paradox that those functional competencies are no longer sufficient. Driven by technological advances and global standards of competition, the definition of the basic competency skills continues to evolve and move upward. Many of the jobs now emerging require the ability to analyze, interpret, comprehend, communicate, and synthesize knowledge, as well as to apply it to unfamiliar problems.

Those rising standards challenge the traditional distinction between vocational/occupational education and general/academic education. As career advancement opportunities for workers with narrowly defined jobs and

specialized skills become more limited, the focus of vocational and technical education will shift from training for jobs to training for work. As important as it may be today to train a textile worker to operate a loom or an auto mechanic to repair an engine, it is important to do that training knowing that technology may make these very occupations obsolete. The new challenge for education and training systems is to prepare people not only for the current job market, but also to move from jobs eliminated by technological advances to jobs being created by new technologies -- to help the factory worker become an electronics technician, or help the auto mechanic become a quality control specialist in a pharmaceuticals plant. The key to developing this flexibility is ensuring that workers, no matter what job they were first trained to perform, learn a transferable set of skills as well, ranging from problem solving and computer programming to enhancing their ability to learn and communicate.

Likewise, the goal of education will be redefined in terms of learning competencies, not earning credentials. The knowledge an individual brings to a job and the ability to adapt that knowledge to new situations will give the advantage to those who know how to learn quickest. More students will return to school for a specific skill or course, and leave before completing a degree program. Postsecondary education and training systems need to develop more and better ways to serve the adult learner, providing

for those who lack competencies and for those who are in process of changing careers or staying current in their fields. Adult basic education has been an historic mission of the North Carolina Community College System, and it is as relevant to economic needs today as it was a generation ago. The major difference now is that basic education must incorporate the development of critical thinking skills.

The Challenges Posed by Demography

* In addition to coping with the demands of the economy, the opportunities generated by technology, and the transformations in education, the North Carolina Community College System faces two fundamental changes in its projected student population. First, the children now entering the educational pipeline come from more diverse social and economic backgrounds, and an increasing percentage are from at-risk populations. More children entering school will come from poverty households, single-parent households, and minority backgrounds. The children from these groups are more likely to lack basic educational competencies, drop out of high school, become teen-age parents, and become dependent on welfare.

Second, the variety of students and their assorted avenues to postsecondary education will continue to expand. There will be fewer college-aged students for the remainder of this century. More students will be going to college

part-time. Many will be working while enrolled. More college students will need both financial and academic assistance. The average age of college students will continue to rise, and many more will be parents of young children. An increasing number of youth, especially talented minorities, will choose the military as their educational route due to cost. And more adult and continuing education will occur outside of college and university settings, sponsored by business, government, and nonprofit groups. (1)

By 1990, an estimated three out of every four jobs will require some education or training beyond the high school level. Yet today more than 1.5 million North Carolinians -- about 45 percent of the adult population -- lack a high school diploma, 800,000 have never completed the eighth grade, and some 25,000 students drop out of North Carolina high schools every year. The bottom line is that North Carolina's economic growth is endangered by a growing mismatch between the skill levels of the workforce and rising job requirements. While this dilemma is confounding, and concrete solutions are elusive, the severity of its consequences will multiply without the state's deliberate intervention. The median standard of living will decline, the number of poor will increase, and the economic gap

(1) Harold Hodgkinson. All One System: Demographics of Education, Kindergarten through Graduate School. (Washington: The Institute for Educational Leadership), 1985.

between the chronically poor and the rest of North Carolina's society will widen. Most at risk are educationally underprepared adults, many who are from historically disadvantaged groups -- minorities, single mothers, and the poor. The next chapter will address their plight.

Figure 1 lists the transformations described in this chapter which are occurring, or should occur, in our changing environment.

Figure 1

Transformations Prescribed by the Changing Environment

<u>FROM:</u>		<u>TO:</u>
Manufacturing-based economy	----->	Information-based economy
National markets and domestic competition	----->	Global markets and foreign competition
Narrowly defined jobs requiring standardized skills	----->	Broadly defined jobs requiring synthesis of diverse skills
Traditional career ladders	----->	Lateral career moves and changes
Technology created in research labs	----->	Applied technology transferred to businesses and workers
Classroom delivered education	----->	Technology assisted education
Literacy skills (reading, writing and computing)	----->	Information skills (interpreting, analyzing and communicating)
Training for jobs	----->	Training for work
Vocational training separated from general education	----->	Integrated core curriculums
Credentials earned	----->	Competencies learned
Formal education completed in youth	----->	Life-long learning
Younger, full-time college students	----->	Older, part-time college students
Mismatch between worker skills and job requirements	----->	Educated worker matched with employment opportunities

Chapter III

THE UNDEREDUCATED AND THE UNSKILLED

America has fundamental advantages in the global marketplace: Our research universities are the best in the world; our scientists, our engineers, and our skilled workers are highly productive. The United States will continue to have a generous share of technological innovation and implementation. But America also has a fundamental problem: An increasing number of once productive workers are falling into a pool of those whose skills have become obsolete, or who lacked from the start the most basic educational, technical, and workplace skills necessary to function in the economy today.

We will refer to this part of the workforce as the bottom fifty percent, which is a rough description of those who fall below the average in educational attainment and economic prosperity. That group in the United States -- and that group in North Carolina -- is not competitive with the bottom fifty percent of some other industrialized nations in terms of educational competencies and work skills.

The Carnegie Corporation's 1986 report, A Nation Prepared, noted that Japan does a much better job educating its youth in the basic competency skills. For instance, the average mathematic achievement score (the percent of

questions answered correctly on a test developed for the Second International Mathematics Study) for an eighth-grader in Japan was 64 percent, compared with 48 percent in the United States. In fact, eleven of the fourteen countries tested in mathematical achievement outscored the United States. (2) The young people who are pulling these averages down are a future constituency of the community colleges.

Why We Need the Bottom Fifty Percent More Than Ever

* The social and economic costs of neglecting the bottom fifty percent are increasing. Those with educational deficiencies represent nearly 80 percent of public assistance recipients, 85 percent of unwed parents under the age of 23, and 68 percent of those arrested in 1981. (3) Moreover, the costs of dropping out of school are increasing. Between 1973 and 1985, real wages for dropouts in the South, ages 20-24, declined 35 percent; and real income for high school graduates without further education declined by 27 percent. And a recent study on functional literacy found that those young people in the South, ages

(2) A Nation Prepared: Teachers for the 21st Century. (New York: Carnegie Forum on Education and the Economy's Task Force on Teaching as a Profession), 1986.

(3) Gordon Berlin and Andrew Sum. Toward a More Perfect Union: Basic Skills, Poor Families, and Our Economic Future, Occasional Paper 3. (New York: Ford Foundation Project on Social Welfare and the American Future), 1988.

21-25, who were unemployed scored significantly lower in all areas of literacy than those employed. (4)

At the same time that a deficit in education and skills is limiting the income and employment opportunities of the bottom fifty percent, there appears on the horizon a critical shortage of skilled workers. The pool of new entrants into the nation's labor force is declining; and an increasing proportion of that declining pool will be poor, undereducated, and from minority groups. The U.S. Department of Labor in Atlanta estimates that 767,000 new jobs will be created in North Carolina between 1985 and 2000, with the average job requiring thirteen or more years of formal education. But it estimates that North Carolina will produce only 543,000 new entrants to the labor market, of whom 81,000 will lack high school credentials.

Serving the bottom fifty percent is not only a matter of equity; it is a matter of economic urgency.

How We Can Serve the Bottom Fifty Percent Better

At the same time that those in the bottom fifty percent become increasingly critical to our state's economic future, the task of providing them with the education and skills necessary to succeed in the work force grows more difficult.

(4) Irwin Kirch and Ann Jungeblut. Literacy: Profiles of America's Young Adults. (New Jersey: Educational Testing Service's National Assessment of Educational Progress), 1986.

Community Colleges -- the "people's colleges" -- have a historic commitment to those with limited economic and educational opportunity. But with the minimum competencies required for employment continuing to rise, that task grows more complex. These least-educated adults, who failed at formal education or were failed by it, are the most difficult individuals to recapture. They also can be expensive to teach.

How do the community colleges go about training the poor, the dropouts, the functionally illiterate to take their place in the workforce of tomorrow? There is no simple answer, of course, but the first step may be a better marriage between basic skills education and vocational and technical training programs. It is the level of competence of these workers, not just in mastering their crafts, but in their critical thinking skills, confidence, work ethic, and entrepreneurial spirit, that will support most of North Carolina's economy. For the Community College System, this emphasis on basic skills would renew the state's historic commitment to "total education," and it would maintain the strength of vocational and technical programs which helped the System foster its invaluable partnerships with business and industry.

As important as instructional content is the challenge of bringing students to that instruction and supporting them through it. The North Carolina Community College System's

open door policy has served North Carolina well, but access is no longer enough: Many of those most in need are unlikely to seek assistance unless they are sought out and encouraged to walk through the open door. The System should concentrate on developing strategies for outreach and recruitment down the country roads, into housing projects, and at church meetings. And after they are recruited, a system must be in place to help them establish clear academic and career goals, and help them overcome self-esteems that are too low or expectations that are too high. That system should be sufficiently flexible to respond to the special needs of the teenage mother with no understanding of the labor market and the professional returning to polish her skills after raising her children. Counseling, day care, flexible class scheduling, transportation, financial assistance, and education delivered to the home through telecommunications -- these are services that will be as important as good teachers and state-of-the-art equipment.

Chapter IV

LEVERS NEEDED TO BUILD THIS BRIDGE

There are a variety of elements, personalities, and circumstances which contribute to a successful educational system. Three operational levers, however, appear to be most promising for transforming the North Carolina Community College System into the ideal system for the new economy:

- * * Mission statement;
- * Governance and leadership; and
- * Quality standards and funding formulae.

Mission Statement

A flexible system such as North Carolina's community colleges is a rare resource among government and education agencies. That flexibility, however, can be accompanied by public confusion over what community colleges are there to do. Misconceptions will persist until the Community College System asserts and claims a clear niche in the education continuum.

We suggest that the Commission consider the following statement as the core of the mission for the North Carolina Community College System over the next twenty-five years:

The North Carolina Community College System exists to help adults master the progressively demanding academic and occupational requirements they will encounter during their working lives, and to help business and

industry adapt to the technologies they will require to remain productive.

This focus would expose students to the skills needed for learning -- reading, comprehending, writing, communicating, computing, analyzing, and synthesizing. It would encourage the System to strengthen programs in vocational and technical training and college transfer. And it would place community colleges in the position of expanding economic opportunities both for their students and for the communities they serve.

Governance and Leadership

North Carolina is already in the vanguard with one of the first comprehensive state systems, and it has a special opportunity to create a governance structure which would enable the System to act in concert and simultaneously allow for innovation and management flexibility at the institutional level.

The State Board and System's administration should promote broad consensus on the System's mission, setting System-wide goals and measures, developing strategies and incentives to support progress towards those goals, and reviewing institutional and program performances. At the same time, local boards and administrators need to mix and match local needs and interests with system goals and standards. Responsibility for organizing institutions,

allocating resources, and developing and operating programs is essentially local.

The process of planning may be the best vehicle for North Carolina's community colleges to build their sense of allegiance to a statewide System. In this regard, the Commission should search for a mechanism to coordinate planning with that of the other state educational systems -- the public school and university systems.

Quality Standards and Funding Formulae

North Carolina's community colleges, like most educational systems in this country, are funded on the basis of enrollment. An incentive system which encourages institutions to fill their classrooms does not necessarily mean that a student leaves having mastered the basic competencies or accomplished any other educational objective. The Community College System should test processes for measuring quality and performance, and create incentives for continuous improvement of the teaching/learning process. The bottom line of performance for all educational systems should be student progress.

A challenge for all of education, but a particular one for community colleges, is giving full attention to those most difficult to teach. Incentives are needed to reward institutions and programs which succeed in helping those least prepared for the demands of the emerging economy. The

current per pupil funding formula appears to be deficient in these respects:

- * it rewards those programs which are least expensive to deliver or are most in demand by students, regardless of the needs of the economy;
- * it discourages efforts to reach out and teach the students who are most difficult and expensive to serve -- underprepared adults and others trapped in economic or geographic isolation; and
- * it discourages investments in programs which involve heavy start-up expenses and are costly to maintain, especially technical and allied health programs which use sophisticated technology.

* In other words, the current incentive system may inhibit addressing the central dilemma for North Carolina -- bridging the gap between the bottom fifty percent and the higher skill level employment opportunities created by the emerging economy. An ideal funding formula would mix a preset FTE allocation with adjustments for program cost and incentives to reward programs which demonstrate student progress and respond to economic need.

A Final Note on Funding

While the North Carolina Community College System is clearly underfunded to accomplish the goals we have suggested, budget recommendations are premature until there is agreement on the mission, governance and leadership, and quality issues. Improving financial support should be the final consideration of the Commission and the state after the more fundamental questions have been answered.

Chapter V

CONCLUSION

In preparing this report, we have reviewed materials concerning the history, the structure, the personality, the funding, and the twenty-five-year performance of North Carolina's unique system of community and technical colleges. As we look over the lessons of the past and the demands of the future, there is no escaping a fundamental proposition: The community college system should occupy a special place in the state's educational firmament.

It should be an open, busy bridge that links education to work and people to the four to seven careers they will have; a bridge that links new technologies developed in our universities to entrepreneurs in the marketplace, that links our least educated to the basic competencies necessary for them to function in a complex society and a dynamic economy. It should be a bridge for dropout youth to high school credentials and a bridge to the labor market for the high school graduate. It should be a bridge to a four-year degree for those who could not otherwise afford one and a bridge back to an occupational skill for the liberal arts graduate who requires one.

If all of this bridging sounds as if we are suggesting something bold, it is not nearly so bold as the notion a

generation ago that the state needed to provide a new kind of education to help North Carolina's farm workers become factory workers and to help the state recruit and spawn factories that would hire those workers. Today, we are suggesting that we retool those institutions. That retooling should concentrate on producing educated critical thinkers and workers for the jobs and the economy of the twenty-first century.

Appendix

ISSUES FOR FURTHER STUDY SUGGESTED BY THE NATIONAL ADVISORY PANEL

The subject of Chapter IV, "Levers Needed to Build the Bridge," generated considerable discussion at our meeting. This expanded version of that chapter is beyond the interests of the general audience, but we include it as an appendix for the Commission in the event it might assist in stimulating discussion and identifying issues.

Mission Statement

A flexible system such as North Carolina's community colleges is a rare resource among government and education agencies. That flexibility, however, can be accompanied by public confusion over what community colleges are there to do. Without a public consensus on the System's priorities, goals and objectives become elusive and progress becomes difficult to measure. There are apparently those who believe that the state's community colleges aspire to be universities; and there are those who believe community colleges exist to serve those who could not qualify for admission at a four-year institution. Misconceptions will persist until the Community College System asserts and claims a clear niche in the education continuum.

We suggest that the Commission consider the following statement as the core of the mission for the North Carolina Community College System over the next twenty-five years:

The North Carolina Community College System exists to help adults master the progressively demanding academic and occupational requirements they will encounter during their working lives, and to help business and industry adapt to the technologies they will require to remain productive.

This focus would expose students to the skills needed for learning -- reading, comprehending, writing, communicating, computing, analyzing, and synthesizing. It would encourage the System to strengthen programs in vocational and technical training and college transfer. It would place community colleges in the position of expanding economic opportunities both for their students and for the communities they serve. It would reduce the emphasis on short-term, occupation-specific education in favor of broad competencies.

North Carolina has been a national leader in promoting economic development through education and in providing customized training services for new business and industry. Other states have modeled their programs after the one in North Carolina. Now, however, there are two more urgent needs: basic skills for the general workforce and technical skills for critical jobs in key sectors of the economy that will lead future economic growth. In addition to serving new industries recruited from outside the state, the System should adopt equally sophisticated methods of providing

technical training for mature industries in need of rebuilding and for fledgling enterprises in need of assistance. All other functions out of necessity assume secondary priority from the perspective of the state.

Local institutions still might provide for the community service needs of the local citizenry. Except to the extent that such service fills an economic development function or provides for the basic education of the people, it would seem that such service should be subsidized locally. To illustrate by example, a Small Business Center which provides help and advice on accounting procedures or advertising strategy to local business people may be an important service that ought to be paid for by the people who use it. On the other hand, a Small Business Center which attempts to identify and train entrepreneurs, package financial deals, and nurture new enterprises could be a high priority in developing both the economy of an area and the competencies of its people, and therefore an appropriate state expense. We hope that the Commission will consider these issues.

The Commission also might study the modest number of students who transfer from North Carolina community colleges to baccalaureate institutions (about 3,400 students transferred in 1986-87). A competent student should not be denied access to advanced educational opportunities because of poor institutional relationships between educational

systems. Cooperative efforts such as the 2+2+2 program -- linking the public schools, two-year colleges, and four-year institutions with a single program track -- should be encouraged. The Commission might consider a programmatic realignment which promotes the development of a core curriculum which can transfer among participating postsecondary education institutions. These arrangements would serve best the bottom fifty percent, those adults for whom the Community College System represents the only point of entry to advanced educational opportunities.

Governance and Leadership

While we have not visited the individual institutions of the System or spoken with their administrators, it appears that the North Carolina Community College today is a confederation, limited somewhat by ambiguous relationships among the state governing board, the system's central administration, and local leadership. In times when resources for education may be scarce, and competition for funding keen, a more united System with a central focus would allow it to adapt better to a changing economic environment, and the consequent integration of technology, dissemination of new knowledge, allocation of resources, and resolution of questions concerning mission and goals. We hope that the Commission will investigate the organization and governance of the System.

We are aware of the diversity of the System, and the benefits this offers. Institutional leaders should have discretionary authority to tailor institutions to their local environment. As the state already recognizes, fifty-eight identical institutions would not serve well a state as large and diverse as North Carolina. In this respect, it should be possible for North Carolina, already in the vanguard for creating one of the first comprehensive state systems, to produce a governance structure which would enable the System to act in concert and simultaneously allow for innovation and management flexibility at the institutional level.

One way of achieving this balance would be to shift accountability from prescriptive methods of management control and regulation to a review system of measuring outcomes against goals. The State Board and administration could strengthen its role in providing the System direction by promoting broad consensus on the System's mission, setting System wide goals and measures, creating strategies and incentives to support progress towards those goals, and reviewing institutional and program performances.

We believe that local boards and administrators should continue to determine how best to mix and match local needs and interests with system goals and standards. Responsibility for organizing institutions, allocating resources, and developing and operating programs is

essentially local. Accountability to statutes, standards, and goals is assured through a comprehensive reporting process. The System's administration would intercede at the local level only when statutes were violated, standards were compromised, or progress towards goals was unsatisfactory. The local institutions would thus protect their flexibility in management while being held accountable for attaining state wide goals and educational standards.

The process of planning may be the best vehicle for North Carolina's community colleges to build their sense of allegiance to a statewide System. Planning should be simultaneous at the state and local levels, and geared towards developing System-wide goals and objectives acceptable to local institutions. When institutions compete to provide costly programs which are too expensive to duplicate, the System's planning process could be responsible for selecting the best site and arranging for consortia to share facilities. Along these same lines, the Commission also might search for a mechanism to coordinate planning with that of the other state educational systems -- the public school and university systems.

Quality Standards and Funding Formulae

North Carolina's community colleges, like most educational systems in this country, are funded on the basis of enrollment. An incentive system which encourages

institutions to fill their classrooms does not necessarily mean that a student leaves having mastered the basic competencies or accomplished any other educational objective. The Community College System should test processes for measuring quality and performance, and create incentives for continuous improvement of the teaching/learning process. The bottom line of performance for all educational systems should be student progress.

A challenge for all of education, but a particular one for community colleges, is giving full attention to those most difficult to teach. Incentives are needed to reward institutions and programs which succeed in helping those least prepared for the demands of the emerging economy. Pre- and post-tests could be administered to measure increases in competencies. A successful student placement, in a job or transfer to another educational institution could be used as measures of performance. The System could provide each institution with a base budget according to enrollment and the remainder of funding would be determined by student progress and outcomes. Whatever the tests, we urge the North Carolina Community College System to take the lead in developing standards of classroom performance. Advances in program quality will be difficult until a process for measuring performance is in place to test, compare, and refine.

Aside from its lack of an incentive for quality, the current per pupil funding formula appears to be deficient in these respects:

- * it rewards those programs which are least expensive to deliver or are most in demand by students, regardless of the needs of the economy;
- * it discourages efforts to reach out and teach the students who are most difficult and expensive to serve -- underprepared adults and others trapped in economic or geographic isolation; and
- * it discourages investments in programs which involve heavy start-up expenses and are costly to maintain, especially technical and allied health programs which use sophisticated technology.

In other words, the current incentive system may inhibit addressing the central dilemma for North Carolina -- bridging the gap between the bottom fifty percent and the higher skill level employment opportunities created by the emerging economy. An ideal funding formula would mix a preset FTE allocation with adjustments for program cost and incentives to reward programs which demonstrate student progress and respond to economic need.

A Final Note on Funding

While the North Carolina Community College System is clearly underfunded to accomplish the goals we have suggested, budget recommendations are premature until there is agreement on the mission, governance and leadership, and quality issues. Improving financial support should be the

final consideration of the Commission and the state after the more fundamental questions have been answered.

On the other hand, according to the Southern Regional Education Board, average full-time instructor salaries in the North Carolina Community College System are the third lowest of the fifteen southeastern states. It appears that faculty salaries are so low that general increases should be an immediate priority. Attention might be given to quality in instruction, and performance of faculty could be measured and rewarded by student progress, as opposed to counting the years of employment. While offering more competitive salaries might raise the level of competence by enlarging the pool of qualified applicants, faculty should be evaluated and the best faculty should be rewarded and retained with salary increases. Likewise, administrators, and non-teaching personnel should be rewarded with pay increases based on performance. Development opportunities to keep faculty and non-teaching personnel up-to-date in their fields are also necessary. If they are to keep students current in the latest skills and applications of their fields, they will need opportunities to renew their knowledge as well, including time for professional workshops and conferences, and return to industry programs.

Figure 2 lists the transformations suggested for the North Carolina Community College System as described in this chapter. While in some cases the transformations have

begun, and the "FROM" column no longer portrays where the System is today, the Commission might consider recommendations which lead to a community college system represented in the "TO" column.

Figure 2

Transformations Suggested for the
North Carolina Community College System

<u>FROM:</u>		<u>TO:</u>
Broadly defined System mission	----->	Focused state priorities for the System
Varying public conceptions about the System	----->	Public consensus on the System's mission
Employment skills based education	----->	Competency skills based education
Job placement	----->	Balance with academic transfer opportunities
Confederation	----->	United System
System central management control and regulation	----->	System provides direction and reviews program and institutional outcomes
Funding based on a per pupil appropriation	----->	Funding based on quality and performance
Funding based on institutional FTE	----->	Funding adjusted for program costs and benefits
Passive access	----->	Active outreach
Faculty and non- teaching personnel pay schedules	----->	Supplement with merit pay scales

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